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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|-------------------------------|------------------|
| 09/700,704 | 11/24/2000 | Kenichi Hirota | 200062US0XPC | 4539 |
| 22850 | 7590 | 10/03/2003 | EXAMINER KORNAKOV, MICHAIL | |
| OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | ART UNIT 1746 | |

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/700,704

Applicant(s)

FUJISAWA

Examiner

Michael Kornakov

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7-12 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,19,22 and 23 is/are allowed.
- 6) ☒ Claim(s) 7-11 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/16/2003 has been entered.
2. Amendment to claim 1 and the introduction of new claims 22 and 23 are noticed.
3. Claims 1, 3, 4, 7-12, 19-21 are pending.
4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Claims 7-11, 20 and 21 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Griesshammer (U.S. 4,156,619) in view of Han.

Griesshammer discloses a method for cleaning semiconductor discs, the method comprises two basic steps: a) after discs are subjected to polishing operation they are removed and b) immersed in a cleaning solution (see abstract and col. 4, lines 4, 5). The cleaning solution of Griesshammer comprises of a non-ionic or anionic surfactant and the rest is organic solvents and or water (col. 2, lines 1,2). As solvents, both polar and non-polar solvents can be used (col. 2, lines 7-10) and polyglycol ethers are specifically indicated by Griesshammer in examples 1 and 2 in col. 3.

The temperature of cleaning process is preferably 50-80°C (col. 2, lines 22-23).

Griesshammer **does** provide the cleaning steps with a surfactant solution at the same temperature as instantly claimed in both polar and non-polar solvents, but **does not** specifically name ethylene glycol monobutyl ether and N-methyl-2-pyrrolidone as ingredients of the cleaning solution.

Han discloses the cleaning composition, identical to that as instantly claimed for cleaning as discussed above. Since Griesshammer provides a motivation to use a surfactant solution in both polar and nonpolar solvents for cleaning semiconductor discs, and since both ethylene glycol monobutyl ether and N-methyl-2-pyrrolidone are known to be part of surfactants as well as being routinely utilized solvents in cleaning processes, a person skilled in the art at the time the invention was made would have found it obvious to employ the solvents of Han in the process of Griesshammer in order to enhance the action of a surfactant and to impart the hydrophobicity to the substrate, as desired by Griesshammer, and thus to arrive at the subject matter of the instant claims.

With regard to the limitations set forth in the preamble to the instant claim 7, which recites that the byproduct to be cleaned derived from a decomposed substance from a process gas containing C and F, it is noted here that, a preamble is not accorded a significant patentable weight since it merely recites the purpose of a process or the intended use of a method, and since the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are **able to stand alone**, as per *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976)

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With regard to the limitations of claim 8, which is concerned with the cage wherein the component to be cleaned is stored, it is noted that this limitation is an apparatus limitation, which is not even an apparatus for performing the steps of the cleaning method, and since the operation is known in reference to the object, the invention of a new machine for performing it does not make a new process, but only a new instrument for applying it. *In re Tarezy-Hornoch*, 158 USPQ 141 (CCPA 1968)

Furthermore, structural limitations of apparatus in a process, which is otherwise met by the applied reference(s), are not given a significant patentable weight, unless these structural features present a manipulative difference in a process steps. In the instant case the size of a storage cage, as well as the presence of such cage does not present a manipulative difference, since the steps of the process as per (reference) can be performed without a cage.

With regard to the limitations of claim 10, its limitations are totally beyond, and are not related to the limitations of the cleaning process, as instantly claimed, but merely describe what had happen to the article much prior to the claimed cleaning process.

Allowable Subject Matter

6. Claims 1, 3, 4, 19, 22 and 23 are allowable over the prior art of record.
7. Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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8. The following are statements of reasons for allowance/indication of allowable subject matter:

- While teaching a cleaning composition with ingredients identical to those instantly claimed, the prior art references fail to anticipate or suggest fairly water containing cleaning composition with a ratio of content of corresponding ingredients as instantly claimed. -
- While disclosing a method for removing a byproduct from surfaces of components and utilizing the steps identical to those instantly claimed, the prior art teaching fails to provide the use of a cleaning composition with a ratio of content of its ingredients as instantly claimed.

Response to Arguments

9. Applicant's arguments with respect to claims 7- 11, 20 and 21 filed 09/16/2003 have been fully considered but they are not persuasive. Applicants argument resides in contention that the process as claimed is not obvious over the applied references because claim 1 has been amended, and allegedly claim 7 contains the limitations of claim 1. This is not persuasive, because the process of claim 7 recites the use of a composition that is far different than the amended composition of claim 1. Therefore, Applicants arguments are much mores specific than the clam.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (703) 305-0400. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (703) 308-4333. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 2450.

M. Kornakov

Michael Kornakov
Examiner
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